REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a supplement to the response and the Request for Continued Examination filed on September 12, 2008. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue. An RCE is being filed concurrently herewith.

Status of the Claims

Claims 1-12 are under consideration in this application. Claims 1-10 are being amended, as set forth above and in the attached marked-up presentation of the claim amendments, in order to more particularly define and distinctly claim Applicants' invention. Claims 11-12 are being added. All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Formality Rejections

Claims 1-2 and 4-8 were objected to for informalities. Claims 1-10 under 35 U.S.C. §112, first paragraph, as not being enabled, and under 35 U.S.C. §112, second paragraph, as being indefinite.

As to the paragraph no. 4 on page 4 of the outstanding Office Action regarding a §112 rejection, Applicants respectfully contend that one skilled in the art would easily implement the communication between the active router and the standby router based upon the relevant contexts and the following paragraphs: "*The active router 11 and the standby router 12 are connected to each other through a communication channel 66 that is connected to network interfaces 56 of the active and standby routers* (p. 11, para. 1)." "*When the two routers are placed within a single housing, those [active and standby] routers may be connected not through [the communication channel 66 that is] the network I/F [56], but directly by a VRRP packet transfer dedicated line between switches 64* (p. 12, para. 1)."

As indicated, the claims are being further amended and further noted with citations of support in the specification as in the following sections as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

Prior Art Rejections

Claim 1 were rejected under 35 U.S.C. §103 (a) as being unpatentable over the newly-cited Li et al. (US 5,473,599) in view of the newly-cited Jensen et al. (US 7,092,354). This rejection has been carefully considered, but is most respectfully traversed, as more fully discussed below.

The redundancy packet transmission system of the present invention (for example, Embodiment 1 depicted in Fig. 6; p. 10), as now recited in claim 1, comprises an active router 11 and a standby router 12 each of which includes a function to realize two or more virtual routers VR1, VR2 therein ("*The redundancy packet transmission router of this embodiment shown in FIG. 6 includes two packet transmission routers, but it is possible to construct a large-scale redundancy packet transmission router that includes three or more packet transmission routers.*" P. 14, lines 10-14), and an internal wiring conductor 66 to connect said active router and said standby router. Each of said active router and said standby router (e.g., Fig. 7) includes: a network interface 56 accommodating communication channels; a processor 63 for making a predetermined process on a received packet; a table memory 61 for storing respective routing information necessary for [[the]] routing processing of said received packet by each of said two or more virtual routers realized in a same router **independently** *("each VR independently manages instructions given to it");* and a program memory 62 in which a program to be executed by said processor 63 provided in the same router is stored therein in advance (as pointed by the Examiner, "*Two copies of a program is each stored in the program memory of the activate and standby routers and executed by the respective standby routers and executed by the respective processors of the routers*").

When a trouble occurs in said active router 11, said system has said standby router take over routing processing of the active router 11 (p. 6, lines 9-11) by synchronizing **per virtual router independently** *("The standby router 12 updates its own routing table on the basis of the transmitted routing information. The virtual router VR 1, VR 2 independently manages the update operation." p. 18, lines 25-28; "FIGS. 13 and 14 show the routing tables of VR1, VR2 that are generated on the standby router after the virtual router function is started by the VR boot order." p. 19, lines 1-4)* **via synchronizing** (1) said respective routing information stored in the table memory of the active router and managed by **only one** of said two or more virtual routers realized and activated on said active router with (2) said respective routing information stored in the table memory of the standby router and managed by **a corresponding one** of said two or more virtual routers realized but not yet activated on

said standby router ("*FIG. 4 shows the situations in which the active packet transmission router has its VR activated but the standby packet transmission router has its VR not activated. P. 5, lines 22-25*"), said processor provided in said active router transmits through the internal wiring conductor to said standby router a packet (e.g., Fig. 9) including a virtual router configuration flag and identification information of **said only one** of said two or more virtual routers realized and activated on said active router, receives a response signal relative to said identification information from **said corresponding one of said two or more** virtual routers realized but not yet activated on said standby router, and transmits and saves to said standby router said respective routing information managed by **said only one of** said two or more of the plurality of virtual routers realized and activated on said active router ("*When the VR boot order flag rises, the router 12 knows that this packet has been sent from the active router with VR activated, and orders its VR to operate*" p. 17, lines 12-14).

As recited in claim 2, said virtual router configuration flag indicates whether to activate said corresponding one of said two or more virtual routers realized but not yet activated on said standby router ("*It first refers to the VR configuration flag. When the VR boot order flag rises, the router 12 knows that this packet has been sent from the active router with VR activated, and orders its VR to operate.*" p. 17, lines 11-14).

FIG. 9 shows the format of the VRRP packet according o the present invention. This format is different from the conventional format shown in FIG. 2 in that (1) a VR configuration flag indicates whether to activate said corresponding virtual routers on said standby router (in the conventional type field), as recited in claim 2, and (2) a VR identifier to distinguish between virtual routers VR1, VR2 is realized on the same active router (in the conventional VRID field which identifying virtual routers realized on different physical routers) (p. 14, last paragraph).

In the prior art packet transmission system, an active router and a standby router are coupled to a plurality of ISPs. In the case that the routing information is copied to the standby router from the active router when switching from the active router to the standby router due to a problem in the active router, to activate a virtual router within the standby router, the routing information of each virtual router VR1, VR2 within the active router needs to be copied to the standby router as the routing information of a corresponding virtual router within the standby router. The routing information of VR1 for managing the routing information of ISP1 and the routing information of VR2 for managing the routing information of ISP2 (of the active router 11).are mixed within the standby router 12 when they are transferred from the active router 11. As a result, the classified information of each

ISP is lost (p. 7, 1st line). The invention is design to solve the prior art problem of mixing the routing information managed by the virtual routers VR1, VR2 which are realized on the same active router (p. 6, 2nd paragraph).

In order to solve such a problem, when receiving a VRRP packet having a VR boot order flag from the active router, the standby router prepares a VR corresponding to the VR identifier stored in the VRRP packet and sends a response (ACK) to the active router. Then, when the active router receives the response (ACK), the active router sends a packet including the routing information having the VR identifier to the standby router. Then, the standby router receives the packet including the routing information having the VR identifier, whereby the routing information is held in a VR corresponding to the VR identifier of plural VRs of the standby router. Thus, the standby router 12 can independently manage each routing table so that the confidentiality of each VR can be assured. Therefore, even if the destination of data from the user is changed from the active router 11 to the standby router 12, the data in VR1 is not leaked into VR2, when being transferred to the standby router (p. 19, last paragraph).

Applicants respectfully contend that Li and Jensen fail to teach or suggest "synchronizing respective routing information of two or more virtual routers VR1, VR2 **per virtual router independently** and **in a one-to-one manner**" according to the present invention.

In contrast, Li's host is configured to point to the virtual address so that the packets it sends out of its LAN are always directed to a virtual router which may be ONLY ONE of the group of real routers which is activated to emulate the virtual router. A standby router among the group of routers, backs up the active router only if the active router becomes inoperative, to automatically begin emulating the virtual router (Abstract). For examples, one embodiment having one standby croup which has one of the three physical and active routers R1, R2, R3 to emulate a virtual router R4 (col. 6, lines 40-42; Fig. 2a), and another embodiment having one standby group 124 which has one of the two real routers R1, R2 emulate a virtual router R3 and another standby group 126 which has one of the three real routers R5, R6, R7 emulate a virtual router R4 (col. 7, lines 30-50; Fig. 2b, each standby group has only ONE virtual router). In short, Li merely emulates ONE virtual router in one real/active router, rather than "**two or more**" virtual routers VR1, VR2 realized and activated in the active router as in the present invention. Li also merely emulates ONE virtual router in one real/standby router, rather than "**two or more**" virtual routers VR1, VR2 realized and to be activated in the standby router as in the present invention. As a result, Li can not and does not teach

"synchronizing respective routing information of two or more virtual routers VR1, VR2 **per virtual router independently** and **in a one-to-one manner**" according to the present invention.

Jensen describes a technique of sharing the routing information between packet transmission apparatuses supporting the conventional VRRP (col. 2, lines 19-36). Like the prior art depicted in Fig. 5 and described on page 6, lines 9-19 of the specification, in the case of copying the respective routing information within the active router into the standby router, Li and Jensen process without being aware of any such two or more virtual routers within the standby router, thus mixing up the routing information of VR1 and the routing information of VR2 of the active router within the standby router.

Applicants contend that the cited references and their combination fail to teach or suggest each and every feature of the present invention as recited in independent claim 1. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

Conclusion

In view of all the above, clear and distinct differences as discussed exist between the present invention as now claimed and the prior art reference upon which the rejections in the Office Action rely, Applicants respectfully contend that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance

of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

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